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Epistemology and Epidemiology: Diagnosing AIDS in rural Malawi

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1, Introduction: Background and Aims

The HIV/AIDS epidemic in Malawi, which is small, landlocked, predominantly rural, and very poor, is both severe and longstanding, AIDS deaths having begun to elevate mortality rates at least as long ago as 1990 (Timæus and Jasseh 2004); in rural areas, where the epidemic began later, deaths from AIDS were said to have first been recognized in the late 1990s (Watkins 2004). Life expectancy, which had historically been low even by sub-Saharan African standards, had risen modestly to around 45 years in 1985, but has now fallen back to around 40 years (UN 2003b). Since 1994, the proportion of adults estimated on the basis of antenatal-clinic data to be HIV positive has hovered around 15 percent. By 2001, rural Malawians were attending several funerals per month (a median of three for women, four for men) (Smith and Watkins 2005, Table 1, p. 652). Although it is extremely rare for those at the funeral to know the results of the deceased's blood test (if indeed there was one and it was communicated to the family), the rich qualitative data that we use shows that by the time of the funeral many are certain that the death was due to AIDS or that it was not.

In this paper we seek to gain an understanding of local epistemology--how Malawians themselves understand the epidemiology of HIV (*kachirombo*, or "little wild beast", from the Chichwa *chirombo*, for wild beast). We approach this by analyzing occasions when several villagers are trying to diagnose the illness or death of someone they know. What information is

considered relevant for concluding that an illness or death was due to AIDS? What sources of information are considered authoritative? On what facts do both rural Malawians and the international research community agree, and where do they disagree? And is it likely that these differences might militate against effective reactions to the epidemic?

After describing our data and methods, we begin with a dissection of the collective process by which HIV or AIDS is diagnosed without a blood test. We then consider occasions when the outcome of this process is satisfying to the participants, and occasions when it is not, when they are puzzled. We show that three core elements of local epistemology are very consistent with messages distributed by HIV prevention programs: that HIV is sexually transmitted, that it is inevitably fatal, and that other sexually transmitted infections are co-factors in the transmission of HIV. We also find areas of dissonance, when these core beliefs are not sufficient to account for departures from expectations because several elements of local epistemology are not correct: that the duration between infection and death can be as short as a few years or even a few months, and that if one partner in a sexual relationship is infected, the other is necessarily infected. We conclude that providing accurate information about the time to death and the transmission probabilities of HIV is likely to increase the effectiveness of AIDS prevention activities.

2. Data and Methods

Our data comprise a rich set of approximately 600 journals kept by rural Malawians on the instigation of the first author and dating from 1999 to the present. The authors of these journals were selected from a pool of fieldworkers on a large and continuing panel survey, the Malawi Diffusion and Ideational Change Project (MDICP). Their task was to be alert to the topics of everyday conversations among friends, family, acquaintances or strangers: fortunately for us, gossiping is a major form of entertainment in this poor country. If a conversation contained some reference to AIDS or family planning¹ they were to listen carefully, and when they could be alone were to write down what they recalled, in English. Some journal-keepers were recruited early, others late. Some have been very prolific; others have not. Some worked only briefly on this project; others continue to do so. Typically, the journalists use ordinary (80-page, lined, centre-stapled) school exercise books. Completed journals are word-processed and

¹ In 2001, we asked them to begin paying attention to conversations about religion as well.

both the originals and the machine-readable files are delivered to the first author.² Some of the journals are available now, and others will be available shortly, at www.malawi.pop.upenn.edu.

Our goal is to render audible the voices of people who are living in the midst of an AIDS epidemic. Thus, the paper is composed largely of verbatim accounts of conversations. We note that the transcripts inform us, but, since many of the conversations are public--in a bus, at a bar, at the bore hole (well)—they also inform those participating or just listening. Our initial task, naturally enough, was to read the texts produced by the journalists. Some journals were picked at random, some were picked because they were early, some were picked because the journalist had not been prolific but may have had a distinct voice, some were picked because we remembered their contents. A file of journal extracts that had been coded using the software package NVivo was additionally useful, but to date only a little more than one-fifth of the 600 diaries have been fully coded. Essentially, we read and read, and made notes. Out of these notes emerged themes, under which we grouped collections of journal extracts. Thus, the journals determined the paper's structure.

The journals are rich in details of everyday life and happenings. Inevitably, given the paper's focus, the extracts we present deal overwhelmingly with sex, disease, and death, but this does not reflect the content of the journals as a whole, some of which are packed with AIDS stories, and others of which say little or nothing about AIDS at all. Necessarily absent from this paper are stories about, for example, hunger, famine, and hoarding; about the difficulties of making a living, especially for women; about the division of household labor; about quarrels; about schooling; about how marriages are organized and how they dissolve; about contraception and children; about orphans; about the role of religion in everyday life. Many extracts are generic, meaning that a single extract will make a particular point particularly eloquently, but the message is not unique to that extract. When extracts appear to be repetitive the reader should take a closer look, because there will often be something, perhaps subtle, to distinguish them. Until all the journals are coded, it is not meaningful to count precisely the number of times a particular subject is mentioned either in the original journals or in this paper. In what follows we occasionally use the word "typical" or indicate that there appears to have been change, but emphasize that this is impressionistic, based on our familiarity with the journals.

2 See Watkins and Swidler (2006) for a more detailed description of the production of these journals.

The journal-keepers are rural residents, some men, some women; all have high-school education (but no more), and participate in other activities, such as farming, in addition to their occasional work for the panel study and their keeping of journals. It is indisputable that their accounts of conversations are filtered through their own perceptions, their own knowledge, their own histories, and their own fears. We do not claim that all those whose voices we hear through the journals are always telling what they believe to be the truth: as in any conversation, speakers may be pursuing their own agenda and modifying their presentation of self for a particular audience.

A Practical Note

The journals from which extracts have been taken are identified by the author's name (anonymized) and the date of the first entry, expressed in the form year-month-day. Names of people and small places have also been anonymized.

The extracts have been edited to remove unnecessary repetition, and to remove extraneous material that would add unnecessarily to the paper's length.³ They have also, most importantly, been edited for clarity. While the linguistic abilities of the journalists are without doubt superior to those of native English speakers with comparable education—all speak at least two languages (their mother tongue and English)—English is not a language that they use on a daily basis except when they are working with foreigners on this or related projects. In addition, none of the conversations they record were initially conducted in English. With frequent reading of this material one becomes adept at extracting the meaning of an apparently difficult passage despite errors in spelling, grammar, and syntax, but editing was required in order to achieve our aim of allowing Malawian voices not just to be heard but to be instantly understood by a wider audience.

That said, even the edited extracts are rarely in standard English. In addition, we have not changed some terms that have entered Malawian English. “To move” connotes sexual activity outside marriage; thus “movious” means “promiscuous”. “To depend”, as in “to depend on one's spouse”, means “to have no other sexual partner”. “To propose” carries a range of meanings, from “to proposition” to “to propose marriage”.

Some untranslatable terms referring to traditional illnesses are rendered in italics, and footnoted.

3 Significant excisions are symbolized by “...”.

3. DIAGNOSING AIDS WITHOUT A BLOOD TEST

Local understandings of the epidemiology of HIV come to the fore when rural Malawians collectively diagnose the cause of an illness and/or death. These conversations are often set in motion by news that someone who once was healthy has lost weight or has died and conclude with a moral about the importance of prevention—“we reap what we sow.” Although our journals typically record public conversations, both the starting and ending points are similar in private conversations among spouses, based on semi-structured interviews conducted by the MDICP in 1999 (Zulu and Chepngeno 2003).

When news arrives of an adult illness or death, there is an immediate suspicion of AIDS—not surprising in a context where MDICP survey respondents report attending three or four funerals a month. The participants then proceed to conduct a “social autopsy:” social because the diagnosis is accomplished through a social process but also because sexually transmitted infections are social diseases. Participants pool their knowledge in a narrative order that is quite similar throughout the collection of journals: they begin with what they know about the current symptoms, proceed to a medical history to try to distinguish this case from those that should be attributed to opportunistic infections or traditional illnesses with similar symptoms, and finally provide a sexual biography as critical supporting evidence. Children who died in infancy or who are chronically sick may provide further clues that at least one of the parents was HIV positive. By the time the funeral occurs, the community has used these autopsies to determine the cause of death.

We begin with a long excerpt from a journal, to illustrate the way that social autopsies emerge naturally in the course of daily activities. This will permit us to use shorter illustrative quotes in the remainder of the paper.

Today I was with my friends, two of them known as Beata and Robert. We were going to the trading centre... to chat since its not very far. From my home to reach the trading is by estimation 7 km. Then Robert my best friend came all the way from his home (to reach his home is 15km) and found me at my home to chat with me and it was around past 1 p.m. when he and found me coming from the bathroom where I went to bathe....and then I told my wife that I was going to the trading with my friend Robert to chat and she accepted and told me that I should not forget to buy soap and aspirin tablets since the son was showing fever and told me to come at night since she wanted to give the son the aspirin tablet treatment in good time.

I agreed with her and then off we were going and on our way we met Beata another friend who was also going to the trading and in total we were 3. We were chatting as we were going and on the way we met a certain man known as Mr. Chunda. The man was coming from the trading and he was on his bicycle and this man is a neighbor to me because he married a woman near me (in my village Ndapasowa where I stay). He is a polygamous man and another wife he married lives at Enesto Village. When the man was coming from there, despite the short distance, and despite that I really know the man very well, this time when he was on his bicycle I didn't recognize him until he dropped his bicycle and greeted me together with my friends who were with me. I noticed that the man was not feeling well he had lost his weight and he had sores all over his arms. I said to him that he is very scarce nowadays even though he is a neighbour. He said that for 2 weeks he was not feeling well, he was coughing and malaria caught him and he said that indeed for the 2 weeks and some days he is scarce at home for he was staying at Enesto with his other wife and said that now he is okay that he is able to cycle and said that he was going to see his first wife now (near me, a neighbor).

Then we chatted like that and then we separated and he was heading from where we were coming and we were going towards the trading centre and as we were going my friend Robert said that the man is extremely thin indeed only for 2 weeks getting thinner like that? Beata also commented the same. Then I told them that I did not recognise him when he was coming from there and I only recognized him when he was near and dropped his bicycle. Beata said that the man is sick and certainly that one is going and his coughing and the sores which he has are the signs of his going (going here means his death <ULENDO>). Friend Robert said that coughing came longtime ago and even sores and not that any person who suffers coughing and develops sores is going (is dying) dying for what? Beata said that dying of AIDS and he said that he knows the man's behaviour very well. Robert said what kind of behaviour has he? Beata said that the man is a polygamous but even though he has 2 wives but he is not satisfied of his wives and he goes with other extra marital partners and he had met him several times at night when he himself was going to his sexual partner at Nawangwa Village and he added saying that the woman whom he is running with, her husband has died after a long illness and people who really know about the death of her husband are afraid to be running an affair with her because a lot of people know that her husband died of AIDS and then he is going there probably unknowingly or because of his negligency if he had been told or knew it himself.

The social autopsies seem to be part of routine life in the villages and to be enjoyable, perhaps a way of passing the time for our journalists as well as others: in many of the excerpts below, the journalist is a participant. But they are also a site for learning how to evaluate their own symptoms, medical history and sexual biography. In this case, after diagnosing AIDS, the conversation takes a personal turn, as Robert says that Beata himself probably is infected because of all the partners he has had. Beata agrees, and they proceed to recount Beata's sexual

history. The conversation then takes another direction as Beata claims that girls who have just reached menstruation and are from a strict family cannot have AIDS. This then leads them to a fine point of epidemiological knowledge that has not been disseminated through prevention programs in Malawi but rather appears to be common sense: that the time to death will be shorter if an infected man takes a partner who is already infected.

Robert said to him that there are some people who are born with AIDS while from her mothers womb and how can he know that the partner he is sleeping with despite her age has H.I.V. contracted from her mothers womb? Beata said that it's very rare and impossible that a baby can contract AIDS from her mothers womb and grow up to 15 years without showing signs of it and he said that by the time she reaches 15 yrs likely she could have already changed her healthy status like: *KUMANGOTUWA KULEPHERA KUBZOLA MAFUTA KUTUWABE* and become extremely thin. (The "Chicbewa words in capital letters" *KUMANGOTUWA KULEPHERA KUBZOLA MAFUTA KUTUWABE* means – She becomes pale despite applying oil on her body. => A sign that the person has H.I.V./AIDS, as he meant). Then we laughed and we agreed that he was saying the truth that he continued saying that 5 to 6 years is enough for a person having *KACHIROWBO KOYAMBITSA EDZI* to start showing signs. (*KACHIROWBO KOYAMBITSA EDZI* => means H.I.V.).

Then the story went back to the man who prompted this issue to start, Mr. Chunda. Beata said that when the man has already had had *KACHIROWBO KOYAMBITSA EDZI* (meaning H.I.V.) in his body then meeting with a sexual partner having H.I.V. as well then a man can not stay up to 6 years – to him a year or 2 years are enough to see the signs of AIDS and to begin completely suffering from it and an example is Mr. Chunda, he said the man had started going with sexual partners long time ago....

The social autopsy and the conversational byways keep the young men entertained for quite a while. Eventually, they end the autopsy with a moral:

And then we concluded that indeed everyone deserves whatever he sows rather plants and if the man's coughing, malaria and sores which he is suffering is due to the reaction of AIDS it's the reality of what he should deserve. We chatted and chatted until we reached the trading and then we changed the subject after meeting with some friends and we chatted, this time we separated with Beata and I only remained with Robert chatting for 3 hours then I bought aspirin tablets and soap and then off we started going back home.

Comments: I started writing this story the same day on 21st/09/03 at around 8 p.m. and stopped at 10 p.m. and went to sleep and at around past 4 a.m. I begun writing and finished writing today on 22nd/09/03 at around past 5 a.m.

Over supper, the journalist recounts the conversation to his wife, who adds new details to the social autopsy and in so doing alerts us to a discrepancy between local understandings of the duration from infection to death. She also shows us a second common source of confusion: if, as over 90% of the MDICP sample reported, a single act of unprotected intercourse with an HIV positive person is “certain” or “highly likely” to transmit HIV, how can it be that some of Mr. Chunda’s partners are still alive?

The same day on 21st/09/03 before I started writing this story, during supper time when I was eating with my wife, I told my wife everything concerning the man whom I meet afternoon on the bicycle, the neighbour Mr. Chunda and the change of his healthy status and what we were talking with my friends. And my wife started saying that the man indeed has AIDS and if there is AIDS in this world then certainly that man has it. She proceeded saying that if that man happens not to have it then certainly nobody in this world has it. I laughed and she said that she meant it. She said how good is he towards God that God will keep on sparing him from not catching AIDS, since AIDS catches those who have the same manners like him? I asked my wife what manners was she trying to say? She said that the man indeed has bad manners, she also heard that he was caught doing sex with the young sister of his second wife at Enesto Village and the rumour circulated even though they tried to keep it secret. And she added saying that whenever she happens to meet with her (the young sister to his second wife at Enesto), for example at the Maize Mill, she notices her healthy changes. She said that at first when she had not slept with the man she was looking perfectly healthy she was plump and even her hip was broadly exposed and her body skin was smoother than nowadays, when her skin is <MAKWINYAMAKWI NYA -> (Chichewa) <meaning – the skin becomes rough>. She went on saying that the virus has found the weak blood in her since only a year has passed since that incident happened.

She went on saying that we people we are different, some have strong blood and CHITETEZO CHANTHUPI CHAKE NDI CHOLIMBA (Chichewa) meaning <some have strong blood and its antibodies as well are strong> and proceeded saying that while others have weak antibodies and when a weak antibodies person catches the virus it doesn’t take many years before showing its signs say it only take a year or 2 while those having strong antibodies can stay even 10 years without being noticed.

She said that ... a lot of women have strong blood antibodies that’s why the woman whom Mr. Chunda have married is still alive and not showing more signs like the coughing which will eventually lead to T.B. She said that if the woman is showing the signs it is that she is only gradually getting thinner and with her

good dressing it is not noticed that indeed she has H.I.V./AIDS (my wife said the words H.I.V./AIDS) 4 exactly as I have written). She said that but some women have weak antibodies and those women doesn't stay long before dying of it (AIDS).

When her husband asks how he knows this, she provides sources that both seem to take as authoritative:

She proceeded saying that... she learnt at the Underfive Clinic that women tend to stay little longer than men, even though both are living with H.I.V./AIDS, because a woman has more compartments in her body where the viruses can hide and be gradually eating away those parts than a male who is like a straight trunk. She said that also women face monthly periods that really help her a lot to remove blood which also gets rid of the viruses but men don't do menstruation period and all the viruses stay in his body. I asked her about this last statement of monthly period if she had learnt that at Underfive Clinic as well. She answered that she didn't learn that at Underfive Clinic but she got it from her friends....

Although it is by now nearly 8 p.m. and supper was over, their interest in the topic hasn't ended. The wife goes back in time to their neighbor's first wife, and here the authoritative sources are other women at the borehole, who describe the husband as giving syphilis three times to his very faithful wife. The relatives of the wife want her to divorce the husband. After reaching this point in the narrative, the conversation again is wrapped up with a moral:

The relatives say that 3 times is enough for their daughter to endure the marriage after contracting the same sexual transmitted disease and if they are not going to rescue her from the bad man certainly they will be the losers since the final stage will be his giving her AIDS and they will lose...Wife said but they are too late because by the time they are taking this drastic measure it means their daughter had already contracted the disease which they are saying they are afraid of. And she said the marriage should certainly end because it really shows that the husband is unfaithful and he doesn't love the wives including this one because had it been he has love towards her for instance he could not have been going to other sexual partners besides her and its better that the marriage should end and probably the woman will get married to someone who might have great love and trustworthy towards her. ...I agreed with her and then we chatted and chatted until she went to bed and I remained writing. => This story I begun writing on 22nd/09/03 from 7:30 a.m. after finishing the other story and end up writing at around to 9 a.m. (something 10 to 9 a.m) (Simon 030918)

4 Typically it is only those with higher education who use the term "HIV/AIDS"; the journalist has completed secondary school, but his wife only completed primary (Standard 8).

We now turn to the symptoms of AIDS and to the evidence that leads us to conclude that three aspects of the epidemiology of AIDS that are critical for prevention are both taken as established facts in the conduct of social autopsies and are consistent with western understandings: that HIV is sexually transmitted, that AIDS has no cure, and that HIV and other sexually transmitted infections are cofactors. These facts are rarely questioned or debated in the journals, suggesting that there is considerable community consensus.

The components of social autopsies: symptoms, medical history and sexual biography

Symptoms

By the time of the first journals in late 1999 and early 2000, rural Malawians were well aware of the symptoms of AIDS, and recognized the involvement of other infections such as tuberculosis and malaria. Inevitably, given the length of time during which AIDS has been impinging upon Malawian families, the extracts below, from different journalists and different conversations, reveal great familiarity with the multiple manifestations of AIDS-related illnesses.

Then the other man said, "It seems that God wants to destroy the whole world through that disease. We shall all die with AIDS because it is now found in many diseases, like TB, malaria, headache, diarrhea and shingles. If a person suffers from one of these diseases, you will just hear that that person has AIDS. People were suffering from those diseases a long time ago, before AIDS came, but today everything is AIDS, which means that everyone will die from it because nobody can say they don't suffer from malaria, and nobody can avoid having diarrhea."(Alice 010604)

A woman, a neighbour, joined the conversation and said that she had seen the dead woman, that she had lost a great deal of weight and that one could not believe she used to be a plump and giant lady. Even her hair showed that she was suffering from TB accentuated with AIDS. Another woman, also a neighbour, agreed ... Then the friend of my mother said that indeed ... the woman had died of AIDS.(Simon 031218)

I went for the supper in one of the restaurants within the trading centre. While in the restaurant a certain man came and demanded a cup of tea for himself and his partner, while there the owner of the restaurant started talking to the man that her worker who was working in the restaurant has been married to a man whose spouse has just died. The proprietor of the restaurant briefly stated that the spouse died of *kachilombo*.

Then the customer's spouse asked the owner of the restaurant that how does she know that she died of *kachilombo*?

She said that she has evidence, she was too thin during her sickness, she also liked meat, chicken and she was demanding for these always and a lot of people were saying a lot of things related to *kachilombo*. And currently if a person is suffering from *kachilombo* it is not strange [that] people do speak the truth. Then the owner of the restaurant said that there are a lot of people who have the virus that causes *kachilombo* but time will come when they will be seen that the *kachilombo* has started working. The other people started laughing. (Chunga 061030)

He laughed and said that it's true because AIDS came a long time ago and its signs and symptoms are widely known to everyone now because each and every day the radio or newspapers or even people when they meet talk about AIDS, and more particularly of its signs and symptoms, such as when a person who was normally black in complexion, when he or she has been suffering for months, their hair becomes soft like Tinala's, and their face pale like his, and they become thinner and thinner like him, nowadays that AIDS is everywhere, one can likely conclude that it's nothing apart from AIDS.

I said, "Maybe it's not AIDS but TB".

He said, "Of course, but the TB of nowadays is three-quarters AIDS, and among the 100 people suffering from TB and admitted to the hospital for treatment, two or five people can be cured because it's real TB which they are suffering but the rest cannot be cured because their TB is a mixture of TB and AIDS.(Simon 050126)

Weight loss is given a certain primacy in the act of social diagnosis: it is one of the first symptoms that is mentioned. Variations on observations of weight loss include the notion of a "weak body" or "a body like a child's." Weight loss appears to be especially convincing when the patient is wealthy and eats a "well-balanced diet" but still loses weight. Also noteworthy is the common observation that the hair of someone with AIDS changes; it becomes "so soft and very thin indeed....and the hairs become so scattered, falling off from her head", or "your hair becomes soft and scraggly." This symptom is interesting, because it is not included on the lists of symptoms distributed by the medical sector, perhaps because it was not a common symptom when AIDS was first documented in the West. The change in hair is locally observed, however, and its repetition in conversation indicates that it has become a legitimate sign of AIDS in rural Malawi. .

Medical history

Since it is understood that AIDS appears in the guise of other diseases but also that malaria and TB may occur without AIDS, past medical history is mined for clues. Current

symptoms can be observed by participants, but past medical history builds on local knowledge accumulated over time. In the excerpt below, the local knowledge is presented in striking detail.

Then Francis said, “That one died in 2001 and his wife died later in 2002. I thought you were aware of his death.” And I told him that I knew nothing about that. Then he continued, “That man was a problem, as you know he was operating a bar and he was also a salesman there at Vingula and he did not stay with his wife at that time as she was at home at Lumbe.⁵ Because he was away from his wife for a long time, he was going with bar girls who were coming into his bar there at Vingula so that he caught three sexual infections at different times. First in 1998 he got buboes and he was treated at a traditional healer there at Vingula and got well. He did not change his behavior towards bar girls so that early in 1999 he got syphilis, he went to a private clinic there at Vingula and it seemed like he was OK, but two weeks later he realized that he was not fully OK as the disease started up again, so that he then went to Nsukwa clinic where he was told that he had syphilis and was given some medicine. But he said that he was not feeling any change with that medicine so he went to Banja La Mtsogolo Clinic there at Nsukwa where he was also examined and told that he had two infections at a time, syphilis and gonorrhoea, and he was treated there and he was also given some medicine to use at home and after three weeks, he got well. He went back to Vingula to continue with his business. After a year, he had some health problems, he was always down with malaria so that his relatives decided to send him home so that he could seek treatment there. ... his bar was closed and he went home but still things did not go well with his health so that he became worse than before until he died in 2001. Meanwhile, when he died, his wife was not in good health, she was also sick, she did not live a long time but died the following year.”(Diston 030614)

To provide yet more certainty about a diagnosis of AIDS, a recounting of current symptoms and medical history is followed by the reconstruction of their sexual biography.

⁵ That is, the man was living in the south of the country, his wife in the north.

On the 13th June 2003, I went to Vingula to attend a funeral at the village of my friend Qualida. The man who died, Mr Tingo, was the older brother of her aunt, her mother's older sister. ... He worked in South Africa⁶ but his sister Qualida did not know the type of job that he'd had.

Mr. Tingo stayed there for about five years without coming home to see his parents and his wife. ... When his friends came back from South Africa to see their parents, they told his parents and relatives that he had got married in South Africa and also had other partners apart from his wife and that what he was doing was very bad.

Now this fifth year, Mr. Tingo came back from South Africa because he was very ill. ... he was very thin, he could not walk or sit down by himself. At that time he was opening his bowels and he was also coughing very much. He was sometimes vomiting if he started to cough. ... he died in the third week after he arrived.

My friend Qualida sent me a message that her uncle had died and I went to the funeral. Many people knew that Mr. Tingo died of AIDS because they had heard that he was very movious with women in South Africa and his friends had advised him to stop but he refused to listen to them. Some people were gossiping that he had died of AIDS. (Alice 030618)

Then one of the men told his friend who sat with him, "That lady is found everywhere. I used to see her at Mzuzu, Salima, Mchinji, Kasungu, Zomba, Mangochi, Blantyre, everywhere she was going to these places with different men. Those days she was fat. She had to fight off the men. But now she is becoming sick, and I am sure that she has taken this HIV because her body talks." But his friend said that he was wrong to say that she had got this HIV because nowadays everyone has it.

But his friend said, "... I say that the lady has got AIDS because of how she moved, I have seen her. If someone wishes to sleep with her he should know that he is making his grave." (Anna 050330)

Fact 1: HIV is sexually transmitted

That sexual biographies are important in diagnosing AIDS shows that people assume that HIV is sexually transmitted, and that sexual transmission is critical in the growth of the epidemic:

"... it can be that he slept with a woman, and that woman had slept with many sexual partners, who eventually slept with one of our sexual partners since we young men nowadays, we don't depend on one

⁶ Malawian men have long traveled to South Africa to work in the mines.

partner and love only her but have several sexual partners, and these partners have several other partners. The end result is that AIDS spreads to thousands and thousands of people.” (Simon 030617)

Not only do people recognize the existence of sexual networks in theory, and the effect that they can have on the spread of HIV, but many evidently believe that they can identify actual sexual networks. The following two extracts are undeniably confusing. Their essential characteristic is that they refer to real networks—to have any chance of understanding them one needs to draw a diagram—rather than a simple chain.⁷

Everyone knows that Modesta died of AIDS. Her husband was the first to die of AIDS, he was working in South Africa. And you know how troubled she was when she died. She had grown very, very thin as compared to the plump healthy body she had had before ... And Suwedi was going with Modesta and some people know that Suwedi is going to die as well. When he was going with Modesta he was married to Andiseni, but he divorced Andeseneni and married the first one whom he divorced long time ago; and he is currently staying with her, and then Andeseneni went mad with prostitution ... Tiyenze has now married her, meaning they are just infecting one another. And therefore I believe Jason is proposing her and that’s his own problem and his parents’ (Simon 030125)

That one is sharing HIV with this village. Many people will die because of her,” Baina said.

“Is that true?” Winece asked.

“Yes, she has made a partnership with Mr. Nkhonde, your priest”, I said. ...

“You should know that Luwaza has given the virus to Nkhonde and Levison. Then Levison has given the virus to Mrs. Thaimu. And Mrs. Thaimu to her husband, I didn’t know if she’s got other partners. And Mr. Nkhonde has given it to his wife.”

Baina said, “No, Mrs. Nkhonde is a prostitute, they have given it to each other. Did you know that Mrs. Nkhonde has made partnerships with Jonasi and Tijesi?”

“And there’s a rumour that Mrs. Jonasi died of AIDS. Jonasi got that AIDS from Naliyera Ndlovi who died last year”, Winece said.

“Does the wife of a priest behave like that?” I asked .(Anna 061108)

⁷ In that regard they differ markedly from the well-known chain of syphilis infection that Pangloss recounts in Voltaire’s *Candide*: “You knew Paquette ... I tasted in her arms the delights of paradise, which produced these torments of hell by which you see me devoured; she was infected and she may have died of it. Paquette had received this present from a very learned Franciscan, who had gone back to the source; for he had got it from an old countess, who had received it from a cavalry captain, who owed it to a marquise, who had it from a page, who had it from a Jesuit, who as a novice had got it in a direct line from one of the companions of Christopher Columbus. For my part I shall give it to no one, for I am dying”.

Nonsexual modes of HIV transmission

The role of sexual transmission is so compelling that alternate modes of HIV transmission-- such as razor blades, knives, injections as well as saliva, fighting (when blood is shed), sharing plates and witchcraft—are only considered in quite limited and understandable circumstances. The *first* is to avoid disrupting social relations. Labeling someone as having AIDS is understood to mean that the person will soon die. It is considered unkind to do this to the person's face and inappropriate at funerals, where it might offend standards of civility (Dunham and Klaitz 2002).⁸ *Second*, accepting, even to oneself, that one's close relative is all but dead appears to be emotionally difficult. For example, when caretakers of very sick people in rural Malawi were interviewed by Angela Chimwaza, they described the symptoms of their patient (always a relative and usually a son or daughter) in the same words used in social autopsies (e.g. thin, diarrhea, coughing). When asked, however, what they thought their patient was suffering from, most speculated about razor blades or witchcraft (Chimwaza and Watkins 2005). A final circumstance in which there is talk of nonsexual modes of transmission is when participants in the social autopsy are puzzled. For example, the symptoms and medical history may provide evidence of AIDS, but the partnership history suggests that sexual transmission was unlikely, or when widespread assumptions about the short duration from infection to death or the high transmission probabilities of HIV are contradicted by authoritative observations. In these circumstances, needles and razor blades are the most likely to be mentioned: we have not yet read an account of a social autopsy in which saliva or mosquito bites were even proposed as the culprit.

Fact 2: AIDS is fatal

If an illness is not AIDS, then it is possible that it is not fatal: if it is AIDS, it is certain to be fatal. The connection between sex and disease is not new: Amy Kaler's interviews with elderly residents of households in the MDICP survey the respondents say that gonorrhea and

⁸ This may be an attempt to ward off stigma, but we think that was more likely the case early in the epidemic, when few knew anyone who had died of AIDS and the prevention programs were emphasizing promiscuity. Now that everyone has a relative who has died of AIDS, a diagnosis of AIDS may be embarrassing for another reason: since it is commonly said that everyone, "even a six year old child," knows that HIV is transmitted sexually and knows how to prevent it, to die from AIDS means that one has been careless or has "deliberately chosen death."

syphilis were around when they themselves were young. In addition, sex, and particularly sex with certain categories of people (such as a woman who has just miscarried) or at prohibited times (during postpartum amenorrhea) were thought to bring diseases (Zulu 1997). What is new is that while sex leads to the new disease, this cannot be cured. The lack of a cure and thus the inevitability of death is not in doubt in rural Malawi now,⁹ but many conversations, especially among older people, draw a sharp distinction between then and now, often with expressions of nostalgia.

[My husband] once got gonorrhoea and he gave me. I did not tell my relatives. We were just going to the hospital until we both got recovered. I did not tell anybody at my home because I knew that I will get recovered since gonorrhoea was not a serious disease as AIDS is. But these days once you are told that you are HIV positive you should just know that you are dying since AIDS has no cure. (Alice 061102)

“It was better in the past, when we were afraid of other sexual infections, which were curable, like buboes, so that once you caught them you could look for some herbs and get well. But these days once you have the misfortune to catch that AIDS, you have to know that your passport to the graveyard is ready.” (Diston 030710)

Some men there were talking about STDs and AIDS. They were comparing the time of our grandparents and our time. They were also differentiating between gonorrhoea, syphilis, *chinyela*,¹⁰ buboes, and AIDS. ...I firstly heard Mr. Bezaliere saying that God would like to kill us all through the AIDS disease and other small diseases like the tuberculosis and even *chinyela* disease but our grandparents died of water. That was the time of Noah when people were not listening to their God and he punished them. But this time, people are just dying with disease anyhow. Though he hasn't killed all of his people at the same time, but he is killing them ... in great numbers. Mr. Bezaliere said that it is better for him to keep on drinking much beer in order to forget that death is waiting to take him. (Alice 030618)

He said that in the old days he could enjoy say eight or ten sexual partners, and he and his friends were only afraid of gonorrhoea, syphilis and buboes because it was simple to get cured with the right traditional medicine but nowadays if one moves with two sexual partners both of them might be infected with AIDS. He went on to say that the diseases he had mentioned like buboes, syphilis and gonorrhoea are nowadays very rare, they have all entered into one disease, AIDS. He said that the badness is that once you are found with it just know that you are certainly dying, in short you are dead, because there is no medicine even

⁹ Although antiretroviral therapy has just begun to be available in some rural areas and is thus just beginning to be mentioned in the journals, when it is discussed it appears that it is understood that it is not a cure, one will still die of AIDS.

¹⁰ *Chinyela* is a traditional illness pre-dating AIDS, although with similar symptoms. Some say it is caused by sleeping with a woman too soon after she gave birth; there is controversy concerning whether it affects women as well as men (see Diston 010218).

though there are some stupid and foolish traditional healers who claim they can cure AIDS but they are just great liars. (Simon 030813)

She then began to tell me about her life when she was young. She said that she was very lucky that the time of enjoying her youth was gone and that back then there was not the AIDS disease. She always thanks God because AIDS came when she had already left off enjoying the world, because she would have died. Mrs. Naphiri told me that she had slept with men in her life and she once got infected with gonorrhea. That was a better time. She did not go to the hospital but she went to a traditional herbalist who helped her to recover. She said that if it was today, she would have got infected with AIDS and she would already be dead. (Alice 30618)

Not surprisingly once rural Malawians learned from prevention programs that HIV was sexually transmitted, their understanding of the epidemiology of the older STIs provided a template for understanding (and thus potentially misunderstanding) HIV: thus, below we briefly describe relevant aspects of the older STIs.

As with AIDS, people could suffer from a variety of symptoms. Naturally enough, the conversationalists are better at describing symptoms than at diagnosing their probable cause. The most obvious confusion is between syphilis and gonorrhea¹¹ but in addition genital herpes is not mentioned by name in any of the journals that we have examined although some descriptions of symptoms suggest herpes infection. When discharge symptoms are said to result from syphilis we have corrected the diagnosis to the more likely one of gonorrhea, while recognizing that there may be additional co-infection. What is more noteworthy in the following extracts than the actual diagnoses, however, is the cataloguing of a variety of highly unpleasant symptoms, and the linking of symptoms to sexual activity.

He went on saying, "Last year in October Donald contracted syphilis¹² from some sexual partner. He showed me and ... there were some sores; big sores very red and wet, stained with blood. On the front of his penis were many of these sores, like he had burns from a fire, and he said he felt pain whenever he walked. He went on to say that he was not wearing underpants because ... pants caused friction against his member and intensified his pain. ... He even transferred it to his spouse and both of them were going ... to a private clinic." (Simon 030129)

Then my wife said that when she was at the bore hole her friend came and asked her if she knew anything with regard to the signs and symptoms she was experiencing. ... The woman said to my wife, "Friend, I am

11 To put this statement into context it is worth remembering that because the syndromic manifestations of syphilis are so variable it was not distinguished definitively from gonorrhea until the late nineteenth century (Sparling 1999). In these examples, too, there is the additional problem of translation into English.

12 Possibly herpes.

puzzled, it's three days since I started having these puzzles!" My wife said to her to tell her what puzzles she meant. The friend told my wife ... that in the first day urinating was very painful and also that the urine ... was white and very odorous and producing a bad smell. She feels pain in her belly especially at the navel and is urinating more frequently than before. The friend told her that she asked her husband where those symptoms she was suffering came from.(Simon 030926)

People recognize that STIs are easily transferable and that the symptoms may appear with great rapidity, which probably influences their understanding of the time from infection with HIV to death from AIDS.

Another friend said that when he was doing tenant farming in Kasungu he had always controlled himself. Then one day when he was completely drunk he met a bar girl there and slept with her ... after two days he noticed that he had contracted gonorrhoea from the bar girl ... he regretted in the morning after he woke up and found that he had lost all his money and his male member begun paining a lot and in the first day it was very hard for him to urinate and after a day he begun urinating yellow urine and he immediately knew that he had contracted a disease and he did not know what kind of disease he had contracted and he showed his best friend who said ... it was gonorrhoea, which comes with white pus.

That both HIV and other familiar infections are sexually transmitted is likely to have facilitated the incorporation of HIV into a set of infections whose basic epidemiology and methods of prevention were well-understood. The correspondence between HIV and other STIs, however, probably made it more difficult to appreciate the differences, particularly with respect to the level of transmissibility and the duration from symptoms to death.

Fact 3: Other sexually transmitted infections are co-factors

It is clear from the earlier excerpts illustrating the process of constructing a social autopsy that in local understandings of the epidemiology of HIV, the presence of other STIs has come to be closely linked with presumptions of HIV infection and thus at higher risk of being socially diagnosed with AIDS (see also Wallman 1996). The excerpt above in which a woman at the borehole consults her friend about her distressing symptoms proceeded to make this connection:

The friend told her that she asked her husband where those symptoms she was suffering came from. ... Instead of answering her directly he began pleading to her to forgive him. He said that he loved her very much and did not want to be divorced, and ... the big mistake he had done, he will never repeat it. He asked his wife to forgive him completely and told her to choose anything she might want him to buy for her.... She said that she is afraid, that she heard from the radio that anyone who happens to suffer this kind of disease, he was also suffering has AIDS.... Wife comforted her that it is not completely true that any person suffering *chizonono* has AIDS but people do say that any person suffering from these sexual

transmitted diseases like *chizonono*, *Maboma*, *Chiindoko* is very vulnerable to H.I.V. viruses to enter into his bloodstream because his/her blood has already weakened and *CHTETEZO CHANTHUPU CHIMAKHALA KUTI NDI CHOFOWOUA* (Chichewa), meaning that the anti-bodies has greatly weakened . (Simon 030926)

“Did you inform her that she had infected you with buboes?”

“I did not inform her”, Harrison said, “because I loved her. After I got well I went to MACRO for HIV blood test in the same year and I was told that the results were negative. After that I found another girl friend here at Lemekani and that one infected me with gonorrhea.”(Diston 020803)\

Some speakers see STDs and AIDS as completely separate, but somehow linked; others seem to perceive STDs and AIDS as “amalgamated:”

He went on saying that all the diseases he had mentioned like *mabomu*, *chindoko* and *chitozono* nowadays are very rare all had entered into one disease Yesi (meaning AIDS still). [Simon 030813]

Although a few speakers in the journals have learned that STI’s increase one’s vulnerability to becoming infected with HIV, most see the connection at a different level: sex with the wrong person brings infection.

The value of social autopsies

Social autopsies are constructed from gossip, and, like gossip, appear to be quite entertaining. Yet they are probably also engrossing because they publicly display the community consensus on how to recognize AIDS. This appears to be considered important for those who fear they might already have been infected but also for those who are collecting information on how to prevent infection.

Beginning in early 2006, voluntary counseling and testing was introduced into district hospitals; before that, it was available only in the three large cities and a few special projects, which effectively excluded rural Malawians from these services. Thus, those who thought they might be infected conducted their own version of a social autopsy, by considering their own

symptoms, medical history and sexual biography. In the following excerpt, a woman diagnoses herself with AIDS and seeks advice from a friend.

I was going to the maize garden on 08th November 2002 with my son Benedicto. We walked on a certain small path which was our short cut to my maize garden and I passed near a certain house where I found a woman with her child in her hands.

She greeted me and my son. After that I asked her about her child, she had told me sometime back that the child was coughing and she has sores all over her body. I asked her about the changes that her child had if any, especially the better changes, but she told me that there was no any change for the better but her child was becoming worse. She also said that she went to the hospital for three days as she was told but still there was no change. She also tried to use the traditional healers treatment but still there was no change. I tried to encourage her that she should go back to the hospital and explain to the doctors that there is no any improvement in her child's sickness.

This woman is called Mrs Iweni and she began complaining about the life of her child. She said that she doesn't think that her child will get recovered because all those things were happening because of her husband's behavior. Her husband is not faithful and he likes to marry a new woman every year. She complained that her husband sometimes gets diseases from other women which he gives to his wife. She also complained that her body has changed since five years ago. She said she had a child two years ago but the child passed away within few months of her birth. That child had some sores on her whole body and after some time, she began coughing, with sores coming out from the nose and on her tongue. Then she began diarrhoea and died. Still her husband did not stop having many sexual partners. She then said that during that time her husband gave someone a pregnancy and the woman had just given birth to a boy child. But both women have the same problem. Mrs Iweni complained that when she was 7 months of her pregnancy she was feeling itching in the whole of her body and when she reached the 9th month she just saw that her private part had sores and the sores were itching....

Mrs Iweni was very worried and she said that she thinks that her husband was infected to the AIDS disease from other women and she was worried that her children will be passing away because of that reason. She then said that she will also die and leave her children as orphans because of her husband's behaviour.

I told her that she should not think about AIDS and death because there is no any proof that her husband had AIDS unless she goes to the hospital for the blood test and hears the results from them. I also asked her to sit down with her husband and discuss about his doings and she should advise her husband about the AIDS information especially she should tell him about the dangerous of AIDS and how she can avoid that but she should not be saying that she has AIDS from her husband.[Alice 021118]

Another implication of the consensus on how AIDS can be recognized and HIV prevented is that those who become infected can expect to be criticized by their fellows not for promiscuity or sin but for consciously and deliberately choosing death. The following excerpt was preceded by the history of a neighbor's niece who ignored the advice of others, became a prostitute, failed to support her parents while she was rich, and is now burdening her family with caring for her as she is dying.

He said that everyone wanting to have Yesi (Yao, meaning AIDS) wants it deliberately because everyone is aware 'please stop moving around with girls when you are single wait until you get married' but still people don't seem to understand but rushing for sex and they only enjoy for a quite short time and suffer for many years before dying....he said that there is no one in this world that who doesn't know of AIDS except a very young person and everyday people hears about it on the radio and why people especially you the youth of today that they don't take to heart they are not satisfied of what they have. If one is married it means he has made his last decision and even the wife as well, if she had married she had also made her last decision and no need to be going for other sexual partners. He said that when she (meaning the niece of the neighbor) was enjoying life her parents were not there, now her parents are the ones with trouble even though she was not assisting them when she was enjoying with men there despite that they don't have much and they get troubled with hunger every year...

I said to him that rather its time everyone had his or her own time. He laughed and said that indeed everyone has his/her own time but sometimes we make our time living in this world to be short, because we neglect the good advice that parents give or what others say as well as what God says to us people. (Simon 030813)

Authoritative knowledge

In diagnosing AIDS within this social context and without a blood test, how do speakers make convincing their knowledge or ideas about who has AIDS, and why?

The anthropologist Michael Lambek has posited that the most authoritative knowledge is that which is tacit, which does not need to be spoken (Lambek 1993). As early as the first journals, the symptoms of AIDS (weight loss, hair changes, sores, TB) had already been observed so often that referring to them did not need to be justified as indicating AIDS. This is evident when a journalist, perhaps wishing to extend a conversation, asks a question for which he

should already know the answer. For example, in the following excerpt a journalist has asked a male friend to describe for him the symptoms of AIDS, and the friend responds:

You are asking deliberately. You ask while you know. The radio everyday announces and ever since the disease came to Malawi and even you read tracts concerning that for yourself and it can't be possible that up until now you don't know the signs.

The symptoms do not need to be justified, but their application to a particular person does. When this happens, observation appears to be the most authoritative manner of identifying sick individuals. In the following social autopsy, when one of the participants says the person they are talking about has AIDS, a second contests this diagnosis. In response, the first says:

You are speaking like that because you did not see the man face to face, and he went on saying that had it been that you saw the man face to face you would not have talked so much but just believed and known that the man is suffering from the AIDS.

In some cases, however, people draw on a source other than tacit knowledge or observation to provide legitimacy for their statements. These sources include the gossip and local knowledge. When one of the journalists asks his wife how she came to know that a male secondary school student is suffering from what she calls, "an unknown disease," she responds by citing the social chain through which she became privy to the information. Though this social chain may amount to little more than gossip or rumor, it grounds the piece of knowledge (that the school boy is infected with AIDS) in embodied individuals who know or live near to the boy:

My wife said she learnt from her mother, who is the best friend of Mrs. Nkolokosa and she has been going to visit him to see him when he was sick. She went on saying that the patient was nearly about to die because (the wife went on saying that) her mother said that she heard from her friend Mrs. Nkolokosa that the patient summoned his Father.

In another case, a friend of the journalist's asks a man how he came to know for sure that some members of a family died of AIDS. The excerpt highlighting this exchange is below. It is notable that Tingo legitimizes diagnosis with local knowledge:

Kili asked him from where he learned this information. Tingo said that he knows about this since the deceased were living in Ernesto village and he also stays in Ernesto village and the rumor is well known to many people within the village and outside the village and everyone knows that the man and his wife had died of AIDS in the way he was suffering together with his wife he said that anyone contracted AIDS is well noticed because of his or her health status becomes very unpleasant and he said that even you can see the way the young girl is looking.

People also attribute knowledge they have about AIDS to public sources like billboards, or the radio. Certainly, many reflect on their bombardment with AIDS messages and information: in a conversation among young men who speculate about their chances with a group of young women, one youth suggests that anyone who does not know about AIDS or change his behavior is an idiot:

But you guys we are receiving AIDS messages almost every day through radios, newspapers, drama groups, political leaders, medical personnel, chiefs and the like even research teams like LETS CHAT¹³ team yearly they come in Black T-shirts but you cannot take a lesson.

Also notable are the instances in which individuals hold one kind of knowledge up to another, or note possible discrepancies between two epistemologies for recognizing AIDS. For example, persons frequently use the phrase, "I am not a doctor" before making a claim about the serostatus of some individual. Below, a man acknowledges that because he is not a doctor, he may not be able to conclusively state that a man under question is infected, but he suggests that the knowledge he has regarding this matter is sufficient for him. He has heard the man refer to the large number of women he slept with "plain", i.e. without a condom.

And that he has AIDS, I believe he has indeed, even though I am not a doctor. But you heard yourself that even a Zasintha Bus can be filled by the ladies with whom he has slept plain always.

Another example, in a discussion of a group of prostitutes:

¹³ Let's Chat has become the field name of the MDICP, since it is on the project T-shirts.

What do you think is the purpose or reason why their body status has greatly and completely changed as you say? Lawrence answered saying, “Nothing, apart from AIDS, definitely. Even though I am not a doctor that has examined them, but I absolutely believe that it’s AIDS. They have this disease in their bodies because indeed they were the sex lovers and great prostitutes. They used to have several sexual partners and the partners were only the Rich and not the poor.

In summary, then, the kind of diagnosis we are seeing in the journals is a very social process. Not only is it done collectively, but part of the ability to make a diagnosis of AIDS without a blood test rests on convincing those around you that the foundation for your diagnosis is a good one. It is this, we propose, that distinguishes information, such as facts about HIV transmission distributed on the radio, from knowledge. Once the information can be used to support an argument, it has become social knowledge: once that knowledge is accepted by others, it becomes authoritative. A number of scholars have noted the role of social relations, social process, and social context in making knowledge authoritative, mobile and capable of gathering adherents (Crick 1982; Latour 1987; Barth 2002), and others have argued against a typological dichotomy between “rational” and “social” modes of knowing (Longino 2002). Recently, many social scientists have taken a sociology of knowledge (for a review, see Swidler and Arditti 1994) approach to understand the articulations of multiple kinds of expert knowledge within development, environmental, and public health projects (Petryna 2002; Agrawal 2005; Pigg 2005). In rural Malawi, we have seen that speakers try to make their knowledge authoritative by citing sources such as the radio, social chains, or familiarity with local knowledge, as well as by reference to tacit knowledge, the facts that are so accepted that they need not be elaborated. In this way, speakers are able to reach consensus on an individual’s serostatus without the technology of a blood test. Their authoritative knowledge is consistent with the facts as they know them, and would generally, we think, be validated by laboratory measures.

Confusions and debates

Although the social autopsies usually appear to unroll smoothly from the initial news of an illness or death to a take-away moral, sometimes pieces do not form a satisfying whole. When this happens, it alerts us to the lacunae in local understandings of the epistemology and

epidemiology of AIDS. As an example of what we mean, consider the follow extract, in which a man who has by his own account long led a promiscuous life learns that he is *not* infected:

In the evening of the same day, I, Laisani, Lackison, Captain and Mr. Nasitanzia went to a certain beer drinking place called Thomi's drinking room and we were chatting there while drinking some beer and as we were chatting, there came a certain man and Mr. Nasitanzia said to him, "Your friend was here yesterday, our sister is admitted at the hospital and she was found that she is lacking some blood. In so doing, we her relatives went there so that we have to offer her some blood. There were some six people who went there to offer her some blood and among the six, it's I and your friend who have been given an OK to offer her some blood. The other four have been condemned. But I am wondering about why it has happened that he is fit to give someone blood. I am wondering because he is the only person I thought was going to be condemned because of the way he behaves with women. But he has been recommended to give her some blood and the people whom I was trusting to be OK are the ones who have been condemned. But he now has to change his behavior after he has been tested to have infection-free blood. I am saying this because when he has gone for beers, he doesn't just go here for beers only, he is always going for women, he doesn't allow a nice looking woman whom he can come to see to just go by without going for her. And with that behavior, I was thinking that he was going to be condemned to give someone blood. Meanwhile, he and I have donated the blood. But he has gone home to Lilongwe and he is supposed to come here again tomorrow so that we can go and see the conditions of our sick sister at the hospital." (Diston 030116)

The others around the table then tell their own stories about giving blood, but eventually Mr. Nasitanzia brings group back to his own puzzle, and to the way he has found to resolve the apparent dissonance between the hospital test on the one hand, and on the other the combination of his understanding of HIV epidemiology and his local knowledge of his relative's sexual behavior. Note, however, that his hypothesis –which is not legitimated with a source, at least in what was written in the journal--does not appear to have persuaded even Mr. Nasitanzia, and the incident does not end with a moral lesson.

Then Mr. Nasitanzia said, "I think that the viruses that cause AIDS don't survive in the blood of the person who takes this *Kachaso* [a form of distilled liquor]. I am saying this because I fail to understand about how that brother of mine has not been found to be HIV positive because he does drink the same *Kachaso* and he loves women at the same time. With that incident, I am thinking that he might have caught the virus, but that it failed to survive in his blood as he is used to drinking these spirits. I do not believe my ears about his blood test results."

Then there came the lady who sold beer to receive her money for the bottle of beer that Laisani told her to bring and Laisani told her that she had to subtract that amount from the money she owes him and the lady accused him of not informing her that he was taking that beer under such a condition before calling for the beers and the two were disagreeing and thus we just left the place and everyone was taking his home direction and we left Laisani discussing with the lady (Diston 030116)

The Time to Death

A major obstacle to Malawians' appreciation of the nature of AIDS—indeed to anyone's appreciation of it—is that a considerable period elapses between first infection and the appearance of AIDS symptoms. It is perhaps not surprising that (so far as we have discovered) no journal mentions the point of initial HIV infection since in those minority of cases in which the newly infected individual does experience symptoms they are likely to be confused with a mild case of flu. And even without HIV, this is not a healthy population: minor flu would be unworthy of notice.

My cousin married a man who had AIDS but she did not know. Unfortunately, they did not go to the hospital for a blood test, though my cousin was a nurse. After three months of marriage the man began coughing. When he went to the hospital, he was told that he had tuberculosis and he received treatment. After a few weeks the husband began suffering from malaria and he was vomiting. He went again to the hospital and was treated and recovered. He stayed at home for one month and again began to suffer from coughing and headache. He went back to the hospital again and received the treatment. After some weeks he began having diarrhea, and at the same time my cousin started to become thin. The husband received treatment again and recovered. Then after a month the husband had shingles and diarrhea at the same time, and he was taken to the hospital where my cousin asked them to test her husband's blood. They found the man had AIDS. She was informed, and she asked them to examine her blood also. She was told that she had become HIV positive from her husband. (Alice 010604)¹⁴

This is a strange story on first reading because the wife was told she had been infected by her husband but the progression to AIDS—going by the series of reported illnesses and hospitalizations the progression may have been as short as seven or eight months—is too swift. But there are clues to its interpretation. First, the journal goes on to record that when the husband was diagnosed as HIV positive the wife was four months pregnant, so the pregnancy must have preceded the marriage. Secondly, the initial reference to the couple's failure to seek

¹⁴ This journal was written in 2001, before voluntary counseling and testing was available in the rural areas. The larger hospitals, such as the one in which the cousin worked, did have facilities to test in-patients.

blood tests before they married implies that at least one of them was already sexually active. With the evidence of the pregnancy it is almost certain that their relationship predated the marriage, perhaps by a considerable period. That the cousin contracted HIV from her husband does not mean that she did so *after* they were married.

Many people understand that some years may elapse between initial infection with HIV and death. Indeed, the first extract below dates from one of the earliest journals, written in 1999.

The young man said, "And it is a better death than dying with AIDS". Some people murmured in agreement.

But someone else said, "It is not a better death, for it's so sudden there is no time to repair one's ways and wickedness. But if one happens to die with AIDS it can take five to eight years."(Simon 990819)

And I said, "So, after the disease AIDS has stayed for three years in the body of the victim, then if the victim catches TB she or he can't last for a whole year, but dies the same year?" "Yes," he said.

And I asked, "This means one can last four years then die of HIV/AIDS?"

"Indeed," Sankho said, "and very few stay up to ten years ... it depends on the strength of their blood ..."(Simon 020615)

People also recognize that from the time of first infection, AIDS symptoms take considerably longer to appear than those of other STIs. (Note how the main speaker's friends react when he mistakenly refers to months rather than years.)

Ndlovi said, "Everybody has got AIDS, it's just that people take different times to start suffering from that disease, it depends on how strong your blood is. If your blood is weak, it can take only three months for you to start suffering from the day you caught the disease." And Bengo and Lackison laughed and said, "Three months, you're wrong!" And Ndlovi said, "Oh! I am mistaken, I meant to say three years. If your blood is weak, you can die in three years' time and if your blood is strong then you can take up to five years before you start suffering. It is different with other diseases like gonorrhoea, syphilis and buboes because their symptoms appear in seven to twenty-one days from when you catch the disease." (Diston 030219)

The simplest view expressed is that survival times are constant, that the person who dies first must have been infected first.

I asked, "Who brought that infection into these families?"

The man replied, “The husbands, .. because the husbands were first to die of that AIDS. In the case of my elder sister, her husband died in 1991 and she followed in 1995, while her daughter’s husband died in 1997 and the daughter followed in 1998.” (Diston 020308)

With knowledge of a particular series of AIDS deaths and suspicions of how individuals were infected, many people are dissatisfied with such a simple view. Thus, some puzzle about the relative survival times of women and men, and of adults and children.

And I asked, “Who will be the first to die?”

Sankho said, “It depends on the power of one’s blood, if the husband has less powerful blood then he dies faster than his spouse, and vice-versa”.

And I said, “What about the children?”.

He said, “Children die the fastest because they have less and weaker blood than their parents”.(Simon 020615)

The notion that women survive longer than men expressed in the long excerpt at the beginning of this paper may help to explain those cases where the wife is believed to have infected the husband, that is, she was infected earlier, but then survived him.

He said that ... men die faster of AIDS because they don't menstruate, but women lose viruses through their periods, when blood is coming out. I told him that he was not the first person to tell me this.

He said ... that's why ... there are some marriages where the man is faithful but the woman is very movious with other sexual partners besides her husband, and there she catches AIDS and gives it to her husband, and you may find that it's the woman who first caught the AIDS and gave it to her faithful husband who is not movious, but the woman remains healthy for a long time and keeps on having many partners while the husband dies and leaves her still alive. (Simon 031114)

In opposition to the notion of superior female survival is the idea that the survival time of HIV-positive women is shortened if they give birth. In addition, the theorist below opined that menstruation, rather than being beneficial in flushing out viruses, is harmful because it leads to anemia and thus is weakening.

He answered saying that the one who dies faster is normally the husband and that he had never heard that the woman had died of AIDS before the man.

Someone agreed and said that it’s very rare, of course it happens, but not so often ... because women have more places in their bodies where the virus can hide than men.

Some agreed but one said that often women who give birth, if they have the virus, are more likely to die than men. He said that this is because they lose a lot of blood during labor and may be anemic. He said that if a man has the virus, since he doesn't lose blood monthly ... then the man lasts for more years than the woman who has monthly periods. (Simon 041002)

The case below, in which the husband infected his wife but then outlived her, is explained by the fact that she was pregnant when he was infected; the commentator evidently believes that the husband then rapidly infected his wife.

I went to a man's funeral at Chidziwitso village. ... He used to sell fish at Vilunga market. This man had had two wives, the first woman had borne him children but the second one is barren.

This man was ill for a long time, ... almost two years. ... At his funeral I heard some women talking about his death. ... One told her friend that the man had died of AIDS. She also said that his first wife had also died of AIDS but she was not the first one to get infected. The man was the one who got infected ... because he was a womanizer. Although he had two wives he also had other partners.

Her friend answered that she had heard that the man liked to drink beer and was carelessly sleeping with bar girls, which means that he did not use condoms. She also said that she heard that he had another partner in the same village. If that partner were having sex with him without condoms then this might be how he got infected with AIDS. But what she was wondering was that she is told that the first wife died of AIDS yet her husband got infected first. ... Why did his wife die first yet he was the one who got infected first?

The first woman told her friend that his wife died first ... because she was pregnant when her husband got infected. Since that time the woman was not feeling well in addition to the pregnancy. ... Now the AIDS disease took the opportunity to cause her to be sick often, she felt as though she had malaria and was vomiting. After she gave birth she did not feel well, the malaria continued and she also suffered from coughing and sometimes she was opening the bowels. During that time, her husband was also showing some changes, coughing and becoming thin. But the second wife ... still looked healthy. (Alice 030618)

The final extract is very interesting.

On Wednesday morning I went to a funeral in a neighbouring village ... I was quiet, listening to the conversation ... until one man asked one of the deceased's relatives who were with us on the veranda the cause of their loved one's death.

He started by lamenting that the death of his brother was very pathetic. He continued, "This brother of mine was staying in Mangochi, ... He went there almost twenty years ago while he was only fifteen years old. He spent all his married life there and had eight children there. ...

“While he was married he started ... having affairs with married and unmarried women. Finally he proposed a certain woman whose marriage had just ended ... since the lady was tired of the behavior of her husband, he was forced to pack up and go. So the divorced man went to a witchdoctor and obtained some medicine to poison his wife so that whoever had sex with her would be injured, either by having enlarged testicles or by being infected with a certain disease. I don’t know whether to call it a sexually transmitted disease or what since it is always an artificial disease, this disease has no cure ...

“So this brother of mine ... had sex with her not knowing that the lady had been poisoned by her former husband and the evil of it is that even the lady herself did not know that she had been poisoned... 15

“This was at the beginning of February. After three days of having sex with this woman, my brother started not feeling okay but he did not know what had happened to his body. He had a great fever ... he thought it was malaria and took a malaria treatment but to no avail. After a week ... he started developing deep wounds around the genital area and even on his penis. ...

“At this point a message reached us here that our brother was ill. We rushed to see him ... the wounds around his genitals ... were getting deeper and deeper as the days went by. We ... tried giving him all sorts of traditional medicine but it did not help at all. ...

“After seeing that the situation was not changing we decided to take the patient to Mangochi District Hospital ... The doctors ... treated him for almost a week but there was no change so they told us that we should go back home and try traditional medicine. We knew that this was not a good omen because we had already tried our best at home and had failed, that is why we had come to the hospitalBy this time our brother was not passing urine and not even going to the toilet. We hesitantly went back home but with no hope that the patient would recover. When we reached home he could no longer speak and ... the same night he passed away.” (Balaika 050305)

The most notable aspect of this story is that the dead man’s last affair began in early February and that within a month, as shown by the date of the journal entry, he was dead. Despite their knowledge that for years this man had been having affairs, his relatives decide, for some reason we cannot know, that this last affair must have been the fatal one; but because they know that death came impossibly quickly they implicate some other agency, namely witchcraft.¹⁶

One Infected, Both Infected

¹⁶ Witchcraft is not considered to be inconsistent with either sexual or non-sexual modes of HIV transmission. Witchcraft addresses another question “Why him?” or the question “why me?” People can, and do, observe that some movious people are dying of AIDS, while others believed to be equally movious are still fat and healthy; witchcraft provides a satisfying explanation (Whyte 1997, Ashforth 2005).

In several MDICP surveys, respondents were asked how likely it was that one act of sexual intercourse with an HIV infected person would lead to infection for the other partner. Over 90% said the probability of transmission was either certain or highly likely. Since husbands and wives are expected to be having intercourse, it is not surprising that the belief that if a husband is infected then so must be his wife, and vice versa, is strongly held.

She said, “Yes, indeed, people say that lying together is dying together. If he has HIV/AIDS, I have HIV/AIDS, but I know that we don’t have it.”

And I asked, “How do you know? Did you go for a blood test?”

She said, “I know myself and he told me one day that he doesn’t have HIV/AIDS. He went for a blood test and found that he doesn’t have it.” (Simon 020319)

When the woman above says “I know myself”, she means that she knows her own behavior, and she has not had a partner other than her husband. It is somewhat unusual for a woman to say that she believes her husband when he told her he had a blood test, in part simply because in 2002 that would have been difficult to do. What people say, however, is likely to depend a great deal on to whom they are talking: perhaps, however, in a more intimate conversation with a female friend, she would have expressed doubt. In the next excerpt we also see the belief that if one is infected both are infected, although this time in the context of polygamy. Apparently the woman being advised had previously been in a polygamous marriage but was no longer, she is “just staying like a baby.” We do not know when that marriage ended: if it was 10 years ago and she has abstained subsequently, she is right not to be worried that she is infected. Since in Malawi remarriage rather quickly follows divorce (Reniers 2003), it is likely that the marriage ended only recently, and thus she should be worried.

She continued by telling Pasonje that if her co-wife has AIDS she must know that she has it also, therefore it is good to go to the hospital for a blood test and know the truth about her body. But if she says she is okay before visiting the hospital, that cannot help her. But Pasonje said that she cannot go to the hospital for that AIDS check-up. If she has it, she will die of it and if she is okay that is her opportunity. She also said that she is not worried because she is not married and she has no any sexual partner. She is just staying like a baby. We all left that story and began chatting, talking about other stories. [Alice 021101]

The belief that if one spouse is infected it is inevitable that the other is as well leads to considerable puzzlement when one dies, supposedly of AIDS, but the other survives.

Miss Tinenenji said that she does not believe that her husband died of AIDS. During the time that Mr Eliasi [her deceased husband] was ill, many people said that he had AIDS since he had several sexual partners. Women did not refuse Mr Eliasi because he had money and when people said he was suffering from AIDS, she believed them. When his illness became serious, she took him to the hospital where VCT was done on him and the results were that he was HIV positive.

The doctors at the hospital tried to save his life but failed. It is now almost seven years since Mr Eliasi died but Miss Tinenenji does not show any signs that she has HIV. She said that if her husband was HIV positive she should be HIV positive as well because they slept together, having sex without ever using a condom. (Alice 041124)

My friend said that his brother did not suffer as long as other AIDS patients, say, for a whole year. But what really amazes him is that if his brother did indeed die from AIDS the wife he left behind should have started showing signs of AIDS. He said that ... by now his wife should have died as well or, if not yet, should be showing signs and symptoms of AIDS like her hair becoming very soft and scraggly. Four years and some months have passed but still she is very healthy. Indeed, now she is married to another man.

(Simon 031112)

If international epidemiologists were a party to these conversations, they could have solved the puzzle by pointing out that HIV is quite difficult to transmit.

Discussion:

What emerges from the collection of journal extracts is not an orderly exegesis. Rather, they reveal a complex system of beliefs, understandings, attitudes, rationalizations, accommodations, and reactions. By examining the claims made, accepted and challenged in the course of diagnosing AIDS without a bloodtest, we learn a great deal about local understandings of the epidemiology of HIV. Everyone is familiar with the symptoms, but they also recognize what we call opportunistic infections, such that symptoms are not enough—further evidence based on the person's medical history and sexual biography is needed in order to differentiate AIDS from other illnesses. At every stage, claims are sutured to context- a person can claim that someone is positive, but must show his/her interlocutors why he/she believes this is so. As noted earlier, the most authoritative knowledge is based on observation and is tacit, but gossip, the radio and stories may also be cited.

In the journals, many signal the horrors of present-day AIDS by recalling, often nostalgically, the days when the battery of sexually transmitted infections to which they were exposed did not include AIDS as a time of infinitely greater security. Those other illnesses—gonorrhea, syphilis, and so on—could be cured by traditional herbal prescriptions, they say, but AIDS has no cure.

What is at first sight puzzling about claims that STIs were curable by traditional means is that, to be blunt, they were not. However, symptoms of untreated gonorrhea generally do not persist for more than a few weeks (or possibly months), and when symptoms recede a cure may be claimed. Likewise, most cases of syphilis subside without external intervention, without progressing to its final and potentially lethal stage. Some deaths from tertiary syphilis undoubtedly occurred, but that such deaths do not seem to have registered on the popular consciousness may stem from a variety of factors: that the death could have occurred as long as twenty years after initial infection; that many syphilitics may have succumbed to some other disease before syphilis had the chance to carry them off; and that the manifestations of tertiary syphilis are highly variable.

People understand that most HIV is transmitted in precisely the same way as the older STIs are transmitted, that is, through sexual intercourse. Some people are deemed to be HIV-positive simply on the basis of their supposed sexual histories, although it is more usual to find participants in social autopsies providing symptoms and medical history ---known, conjectured, or inferred—as supporting evidence. The concept of sexual networks is well understood, to the extent that some commentators are confident that they know who, in an extensive network, has infected whom. Such pronouncements signify not so much a knowledge of individual cases of disease transmission and acquisition, which would be impossible, as an understanding of the usual mode of HIV transmission.

On surveys, many report numerous additional non-sexual ways in which the virus can pass from person to person. Although prevention programs have used this information to call attention to “misconceptions” about non-sexual transmission that might reduce motivation to control one’s sexual behavior, in rural Malawi the non-sexual modes of transmission are rarely considered in the course of a social autopsy. Moreover, and importantly, most of the items on the extensive list do not in fact pose a danger of transmission since HIV is a peculiarly fragile

organism, highly susceptible to exposure to air, and does not have the ability to infect after it has lurked for some time on a knife, say, or a razor blade. Injections, which were named by some conversationalists, do pose a danger because of the possibility that blood that had been drawn into the syringe while an HIV-positive person was being injected was re-injected, when the implement was re-used, into the next patient.¹⁷ We should note in passing that the fact that people give face value to a multiplicity of non-sexual modes of transmission provides confirmation that public-health messages are capable of getting through to their target populations. It is unfortunate, then, that such messages are not invariably accurate. Nevertheless, one should not discount the capacity for independent thought among members of this target population. A man who drily observed that if barbershops were a hot-bed of infection, as the government declared, then almost everyone would be sick (Simon 040217), is a case in point.

Three facts about HIV epidemiology are displayed in the social autopsies and are never challenged: that HIV is sexually transmitted, that a diagnosis of AIDS is equivalent to a diagnosis of death sooner rather than later, and that long-known sexually transmitted infections such as syphilis and gonorrhea are implicated in HIV transmission. All of these facts are likely to facilitate effective strategies of prevention. Two other undisputed facts, however, may hinder effective prevention: that the time from infection to death can be very short and that the HIV virus is highly infectious.

People do appreciate that HIV-positive individuals can live for years without developing symptoms and that this is in marked contrast to the epidemiology of the classic STIs, whose symptoms may appear within days. (It is doubtful that people know that some STIs are not necessarily symptomatic at all.) Nevertheless, it is likely that many people under-estimate the length of the period during which HIV may lurk without signaling its presence. Such a misunderstanding is significant because among the strategies being adopted to avoid infection is that of mutual faithfulness within marriage. Perhaps the man and his wife who pledged to be faithful to one another in 1996 and were still maintaining that behavior in 2002, at which time

¹⁷ Blood transfusions were not mentioned as a source of infection despite the fact that this mode of introduction of the virus makes infection inevitable; but transfusions are rare in rural Malawi. The possibility of mother-to-child transmission is perhaps a more surprising omission but may simply reflect the fact that we did not read every journal; certainly, there is an oblique reference to children's infections, in the context of the relative survival times of adults and children (Simon 020615). There is no reference to gay sex.

neither showed signs of AIDS (Simon 020319), are in the clear: perhaps neither was infected at the time they made their pledge, but six years is a little early to be sure. In the case of a man who stopped having affairs a mere two years earlier and since then has had sex only with his wife (Simon 031016) it is far too early to tell. Both men are quite sensibly apprehensive of AIDS, and appear a little proud of changing their behavior, but the only way to confirm that their strategy has been successful—that is, that they were not already HIV positive when they adopted it—would be by a blood test.¹⁸

The belief that if one spouse is infected it is inevitable that the other spouse is infected as well—“lying together is dying together” (Simon 020319)—is held particularly strongly. The belief is probably reinforced by personal knowledge of many cases in which the AIDS-related death of one spouse has been followed by the AIDS-related death of the other. The strength of the belief is shown not just by unequivocal statements about the inevitability of mutual infection but by stories in which the continuing survival and apparent good health of a surviving spouse is interpreted as contradicting the diagnosis of AIDS that had been made on the spouse who had died. Perhaps, also, the belief derives from or is reinforced by an analogy drawn with the older STIs, which are indeed highly contagious. Gonorrhea, for example, which is the most infectious, has a per-coitus male-to-female probability of transmission as high as 0.50 (Bracher, Santow and Watkins 2003). In the case of gonorrhea, then, it is all too possible that an individual be infected by a single act of intercourse. It is even possible that the individual be able correctly to identify the person from whom their infection was acquired. In an environment, such as Malawi’s, of high HIV prevalence, of complex sexual networks, and of insufficient HIV testing, accurate identification of the source of a particular HIV infection—despite the opinions of many conversationalists—is highly unlikely.

Furthermore, to make an analogy between gonorrhea and HIV is highly misleading also because the virus’s per-coitus transmission probability is orders of magnitude lower, and perhaps as low as 0.001 although the more commonly cited probabilities are 0.0030 (male-to-female) and 0.0015 (female-to-male) (Gray et al. 2001). Admittedly, various factors may conspire to raise this probability. First, HIV transmission is more likely in the very early (and asymptomatic)

18 Of course, even if they were HIV-positive when they changed their behavior, their strategy will have been successful in that they have protected their potential extramarital partners from risk—at least from them. In that sense, a pledge of mutual faithfulness is always beneficial in the wider sense, if not to the couple concerned.

stage of infection. Secondly, in the presence of an STI, the probability of HIV transmission is up to about four times more likely, depending on the STI; and the probability of HIV acquisition is up to about three times more likely. However, taking the higher estimates of the baseline HIV transmission probability, and with the worst sort of scenario—both partners STI-infectious and the man having recently seroconverted—the effective per-coitus HIV transmission probability is still less than 0.10. This is pretty much a worst-case scenario, however, and in most cases the probability will be considerably lower.

Conclusions

If we compare accepted local understandings of the epidemiology of HIV with the accepted international understandings, there is a high degree of congruence. It undoubtedly facilitates effective prevention in this context that sexual transmission is understood to be the prime route of infection, the understanding that AIDS is inevitably fatal provides great motivation for avoiding infection (Watkins 2004), and the perception that AIDS and other STIs are somehow linked may increase motivation for treating them, which could reduce transmission probabilities. Prevention programs have emphasized the importance of disseminating accurate information and dispelling misconceptions reported on surveys. Some misconceptions are unlikely to be important for prevention—for example, it is hard to see how attributing greater HIV resistance to women because they menstruate would hinder effective prevention. By examining the sources of dissonance in social autopsies, however, we identified two areas where the facts are clear in the international community but not in rural Malawi. One of these is the duration from infection to symptoms, the other is the transmission probability of HIV in a single act of unprotected intercourse with an infected person. We believe that these are relevant for effective prevention for several reasons. A major strategy for prevention in rural Malawi is carefully selecting partners on the basis of local knowledge, a second major strategy is divorcing a spouse believed to be infected. Both of these may, in the aggregate, be helpful in slowing the pace of the epidemic (Watkins 2004). If, however, those courting a widow are wrongly reassured because her symptoms did not appear shortly after her husband died of AIDS, or if a wife believes that she must already be infected and there is thus no point to divorce, the potential effectiveness of these strategies would be hindered. It may be that the rationale for leaving these misconceptions uncorrected is properly maternalistic. Based on our analyses of local epistemologies of HIV and their implications for prevention, however, we conclude that

correcting these important misconceptions is important.

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